ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
	)	
BEACON BROADCASTING CORPORATION	)	FCC File No. BPED-900905ML
	)	
For a Noncommercial FM Broadcast Station at Allentown, Pennsylvania	)	

To: Chief, FM Branch

PETITION FOR LEAVE TO AMEND

Beacon Broadcasting Corporation (hereafter "Beacon"), by its attorney, hereby respectfully seeks leave to amend its above-referenced application to include the attached engineering amendment. In support of this request the following is submitted for the consideration of the FM Branch.

1. On May 27, 1992, Capital Cities/ABC, Inc. filed an informal objection to Beacon's application on behalf of WPVI-TV (Channel 6) Philadelphia, Pennsylvania. Capital Cities alleged that the engineering proposal by Beacon presently on file with the Commission did not conform with the requirements of Section 73.525 of the Commission's rules.

2. Beacon believes that its present engineering proposal fully complies with the requirements of Section 73.525 of the rules. Beacon's engineering consultants, Lechman & Johnson, Inc., made an exhaustive showing in documenting this compliance in an amendment filed on December 20, 1991. Accordingly, Beacon

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believes Capital Cities objection is wholly without merit.

3. Beacon's application has been pending before the Commission for a period of two (2) years. The Commission's processing of the application has undoubtedly been delayed by the filing of various petitions seeking its dismissal, the most recent of which is the Capital Cities pleading. In order to quickly and expeditiously resolve the Capital Cities objection, Beacon is further amending its application to bring it into engineering conformity with the competing application by Lehigh Valley Community Broadcasters Association, Inc.1 Beacon believes that this further amendment will remove any possible basis for objection by Capital Cities and allow for the prompt designation of the Beacon and Lehigh Valley applications for comparative hearing.

4. Wherefore, based on the foregoing, Beacon requests that its application be amended in conformity with the attached engineering amendment.

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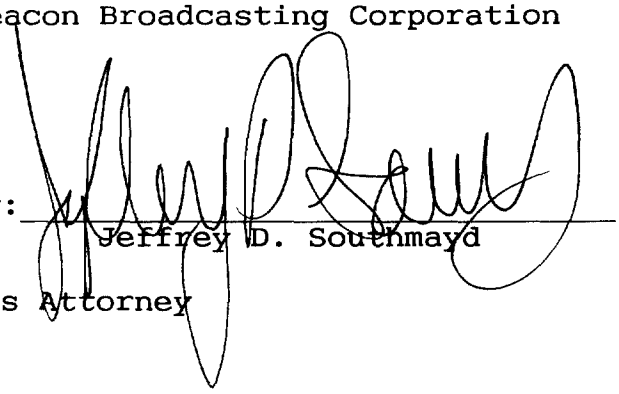
1 Surprisingly, Capital Cities did not file an objection to this application even though it proposes the same transmitter site and power specified by Beacon.

Respectfully submitted,

Beacon Broadcasting Corporation



By: _____
Jeffrey D. Southmayd

Its Attorney

Southmayd & Miller
1233 20th Street, N.W.
Suite 205
Washington, D.C. 20036
(202) 331-4100

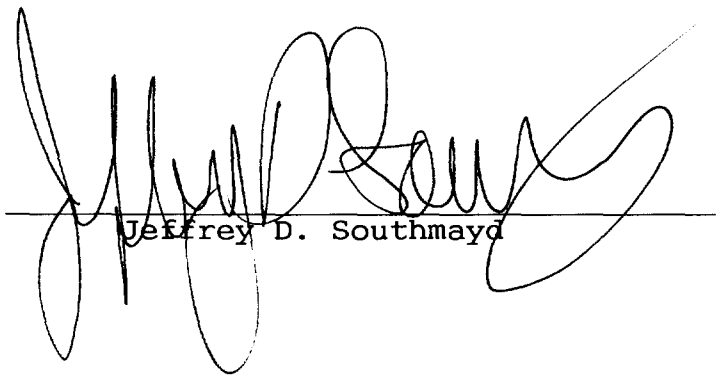
Date: July 27, 1992

CERTIFICATE OF AMENDMENT

I, Jeffrey D. Southmayd, do hereby certify that on this 27th day of 1992, I caused a copy of the foregoing "Petition For Leave To Amend" to be served by first-class United States mail, postage prepaid, to:

Ms. Marian Lindberg
Capital Cities/ABC, Inc.
77 West 66th Street
New York, New York 10023
Counsel to Capital Cities/ABC, Inc.

Malcolm G. Stevenson, Esquire
Schwartz, Woods & Miller
Dupont Circle Building
Suite 300
1350 Connecticut Avenue, N.W.
Washington, D.C. 20036
Counsel to Lehigh Valley Community Broadcasters, Inc.



Jeffrey D. Southmayd

CERTIFICATE OF AMENDMENT

Re: BPED-900905ML

Beacon Broadcasting Corporation hereby amends the above-referenced application for a noncommercial FM station on Channel 207A at Allentown, Pennsylvania, to include the attached minor engineering amendment.

Date: 7-23-92

President

Section V-B - FM BROADCAST ENGINEERING DATA	FOR COMMISSION USE ONLY File No. _____ ASB Referral Date _____ Referred by _____

Name of Applicant

BEACON BROADCASTING CORPORATION

Call letters *(if issued)*	Is this application being filed in response to a window? ☐ Yes ☒ No If Yes, specify closing date: N/A
NEW	

Purpose of Application: *(check appropriate boxes)*

- ☒ Construct a new (main) facility
- ☐ Construct a new auxiliary facility
- ☐ Modify existing construction permit for main facility
- ☐ Modify existing construction permit for auxiliary facility
- ☐ Modify licensed main facility
- ☐ Modify licensed auxiliary facility

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

- ☐ Antenna supporting-structure height
- ☒ Effective radiated power
- ☐ Antenna height above average terrain
- ☐ Frequency
- ☐ Antenna location
- ☐ Class
- ☐ Main Studio location
- ☒ Other *(Summarize briefly)* Change antenna pattern and polarization; Amend application

File Number(s) BPED-900905ML

1. Allocation:

Channel No.	Principal community to be served:		
	City	County	State
207	ALLENTOWN	LEHIGH	PA

Class *(check only one box below)*

☒ A ☐ B1 ☐ B ☐ C3 ☐ C2 ☐ C1 ☐ C ☐ D

2. Exact location of antenna.

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.

Southside of East Rock Road. 1.25 km ENE of Intersection between 3rd Lane and East Rock Road. Lehigh County, PA. (WFMZ Tower).

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude or East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed.

Latitude	40°	33'	54"	Longitude	75°	26'	26"

3. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? ☒ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both. WFMZ TV, licensee Ch. 69 and WFMZ FM

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

No changes to the WFMZ-TV existing tower

SECTION V-B – FM BROADCAST ENGINEERING DATA (Page 2)

4. Does the application propose to correct previous site coordinates? ☐ Yes ☒ No
If Yes, list old coordinates.

Latitude	Longitude
° N/A ' "	N/A ° ' "

5. Has the FAA been notified of the proposed construction? ☐ Yes ☒ No
If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No. N/A

Date N/A Office where filed N/A

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

	Landing Area	Distance (km)	Bearing (degrees True)
(a)	Allentown Queen City	3.20	279°
(b)			

7. (a) Elevation: *(to the nearest meter)*

(1) of site above mean sea level: 283.4 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 203.6 meters

(3) of the top of supporting structure above mean sea level [(aX1) + (aX2)] 487.0 meters

(b) Height of radiation center: *(to the nearest meter)* H = Horizontal; V = Vertical

(1) above ground: N/A meters (H)
113.0 meters (V)

(2) above mean sea level [(aX1) + (bX1)] N/A meters (H)
396.4 meters (V)

(3) above average terrain N/A meters (H)
244.8 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(bX3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No. VB-1

9. Effective Radiated Power:
(a) ERP in the horizontal plane N/A kw (H*) 0.15 kw (V*)

(b) Is beam tilt proposed? ☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No. N/A

N/A kw (H*) N/A kw (V*)

*Polarization

10. Is a directiona antenna proposed? [X] Yes [ ] No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of horizontally and vertically polarized radiated components in terms of relative field. Exhibit No. VB-7

11. Will the main studio be located within the 70 dBu or 3.16 mV/m contour? [X] Yes [ ] No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125. Exhibit No. N/A

12. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast *(except citizens band or amateur)* radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference? [X] Yes [ ] No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. *(See 47 C.F.R. Sections 73.315(b), 73.316(d) and 73.318.)* Exhibit No. VB-2

13. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers. Exhibit No. VB-3A & VB-3B

14. Attach as an Exhibit *(name the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers: Exhibit No. VB-4A & VB-4B

(a) the proposed transmitter location, and the radials along with profile graphs have been prepared;

(b) the 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mV/m contour; and

(c) the legal boundaries of the principal community to be served.

15. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 494 sq. km. Population 286,093

16. Attach as an Exhibit a map *(Sectional Aeronautical charts where obtainable)* showing the present and proposed 1 mV/m (60 dbu) contours. Exhibit No. VB-5

Enter the following from Exhibit above:

Gain Area 0 sq. mi.

Loss Area 143 sq. mi. (370 sq km)

Percent change (gain area plus loss area as percentage of present area) 42.8 %.

If 50% or more this constitutes a major change. Indicate in question 2(c), Section I, accordingly.

17. For an application involving an auxiliary facility only, attach as an Exhibit a map *(Sectional Aeronautical Chart or equivalent)* that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No. N/A

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675. (File No.: N/A)

18. Terrain and coverage data *(to be calculated in accordance with 47 C.F.R. Section 73.313).*

Source of terrain data: *(check only one box below)*

☐ Linearly interpolated 30-second database ☐ 7.5 minute topographic map

(Source: _____)

☒ Other *(briefly summarize)* Data taken from WFMZ-TV Station records on file with the FCC and verified by using $7\frac{1}{2}$ minute topographic map.

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1 mV/m contour (kilometers)
0	269.3	10.8
45	273.9	18.2
90	253.2	16.9
135	230.3	11.5
180	197.1	12.2
225	177.3	11.0
270	273.0	8.1
315	284.6	7.6

Allocation Studies

(See Subpart C of 47 C.F.R. Part 73)

19. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico? ☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

Exhibit No. N/A

20. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada? ☐ Yes ☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947. Exhibit No. N/A

21. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following: Exhibit No. VB-6

See Engineering Statement – Table I, Table III

(a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
(b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
(c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
(d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
(e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
(f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
(g) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
(h) The name of the map(s) used in the Exhibit(s).

22. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as an Exhibit information required in 1/ *(separation requirements involving intermediate frequency (i.f.) interference)*. Exhibit No. N/A

23.(a) Is the proposed operation on Channel 218, 219, or 220? ☐ Yes ☒ No

(b) If the answer to (a) is yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207? N/A ☐ Yes ☐ No

(c) If the answer to (b) is yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223. Exhibit No. N/A

(d) If the answer to (b) is no, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose. Exhibit No. N/A

1/ A showing that the proposed operation meets the minimum distance separation requirements. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.

SECTION V-B – FM BROADCAST ENGINEERING DATA (Page 6)

(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No. N/A

(1) Protected and interfering contours, in all directions (360), for the proposed operation.
(2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location.
(3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
(4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
(5) The official title(s) of the map(s) used in the exhibits(s).

24. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525? See Engineering Statement – Table II & Table V

[X] Yes [ ] No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No. VB-9

See Engineering Statement & Table IV

25. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1 - 107.9 MHz)?

[ ] Yes [X] No

If Yes, attach as an Exhibit information required in 1/. *(Except for Class D (secondary) proposals.)*

Exhibit No. N/A

26. Environmental Statement *(See 47 C.F.R. Section 1.1301 et seq.)*

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact?

[ ] Yes [X] No

If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.

Exhibit No. BN/A

If No, explain briefly why not. The proposed operation is categorically excluded from environmental processing under the provisions of Section 1.1306 of the FCC Rules and Regulations. SEE VB-8.

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name *(Typed or Printed)*	Relationship to Applicant *(e.g., Consulting Engineer)*
J. W. Stielper	Telecommunications Consultant
Signature: J. W. Stielper	Address *(Include ZIP Code)* LECHMAN & JOHNSON, INC. 16201 TRADE ZONE AVENUE #108 UPPER MARLBORO, MARYLAND 20772
Date: June 30, 1992	Telephone No. *(Include Area Code)* (301) 390-0900

ENGINEERING STATEMENT

BEACON BROADCASTING CORPORATION
AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT (BPED-900905ML)
NON-COMMERCIAL FM RADIO STATION
ALLENTOWN, PENNSYLVANIA

Channel 207A 0.125 kW (V) 245 Meters

June 30, 1992

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AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT (BPED-900905ML)
NON-COMMERCIAL FM RADIO STATION
ALLENTOWN, PENNSYLVANIA

Channel 207A **0.125 kW (V)** **245 Meters**

ENGINEERING STATEMENT

BEACON BROADCASTING CORPORATION
AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT (BPED-900905ML)
NON-COMMERCIAL FM RADIO STATION
ALLENTOWN, PENNSYLVANIA

Channel 207A **0.125 kW (V)** **245 Meters**

This Engineering Statement is submitted in support of an amendment to the application by Beacon Broadcasting Company (Beacon), seeking authorization to construct a new Non-Commercial FM Radio Station to serve Allentown, Pennsylvania. Beacon has an application on file to operate on Channel 207 at Allentown (File No. BPED-900905ML). The proposed transmitting site is within the coverage area of Station WPVI-TV Channel 6. Therefore, there is potential for interference to the service of television Station WPVI-TV, Channel 6, from the presently proposed Beacon operation.

In the pending application to determine the extent of interference to WPVI-TV Beacon supplemented the standard average terrain interference model with an alternate showing based upon terrain profiles. It is now proposed to amend the pending application so that when interference is predicted using the average terrain model, the population within the area of interference is in compliance with the rules. Specifically, Beacon proposes operation with maximum effective radiated power (ERP) of 0.125 kW in the horizontal and the vertical planes utilizing a vertically polarized directional antenna system. No changes in site or antenna height are proposed. The applicant proposes to side-mount the FM antenna on the existing tower of television Station WFMZ-TV. The coordinates of the site are:

North Latitude: 40^0 33' 54"
West Longitude: 75^0 26' 26"

These coordinates were taken from the FCC files for station WFMZ-TV. The ground elevation at the proposed site is 283.4 meters (930 feet) above mean sea level. It is proposed to side-mount the transmitting antenna, with the center of radiation at 113 meters above ground level.

Table I is a study of all co-channel and adjacent channel allocations, applications and authorized stations pertinent to operation on Channel 207A at the proposed site.

Table II includes the pertinent data used to predict the distances to the 60 dBu coverage contour of the proposed operation. These distances were determined by using Figure 1, F(50,50) FM propagation curves of Section 73.333 of the Commission's Rules.

Table III is an allocation study listing all pertinent stations and their appropriate contour distances.

Exhibit VB-5 is a map showing the predicted 60 dBu contours as originally proposed (shown as present) and as proposed by this amendment (shown as proposed). Thus, Exhibit VB-5 represents the "major/minor change" showing.

The loss area consists of 370 sq.km. There is no area gained. The area within the 60 dBu contour of the pending original operation contains 864 sq.km. Percent change is given by the following formula:

$$\frac{\text{Gain Area + Loss Area}}{\text{Original Area}}$$

Thus $$\frac{0 + 370}{864} = 42.8\ \%$$

Since this value is less than 50 percent, this proposal does not constitute a "major change" application.

Exhibit VB-6 is an overlay of a map showing the allocation study using the data listed in Tables I & III of this report. As shown, operation on Channel 207A as proposed complies with Section 73.509 of the Rules and Regulations.

Exhibit VB-7 includes the proposed horizontal plane directional antenna patterns in relative field strength and dBk, a tabulation of the patterns and a statement concerning the antenna.

Exhibit VB-8 is a RF radiation hazard study using the formulas given in OST Bulletin No. 65. Part 73 of the FCC's Rules and Regulations was amended, effective January 1, 1986 to implement the National Environmental Policy Act of 1969 (NEPA). The rule amendment identifies human exposure to RF radiation as an issue for explicit consideration when evaluating potential environmental effects of certain facilities regulated by the FCC. The proposed facility has been evaluated based on OST Bulletin No. 65 (October 1985), "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation" and complies with these standards. Exhibit VB-9 shows the results of the calculations associated with this study. Also, it is proposed to mount the transmitting antenna on an existing tower. In summary, this proposal is categorically excluded from environmental processing.

As noted above, there is potential for interference from the proposed Beacon operation to the service of Channel 6 television Station WPVI-TV at Philadelphia. Table IV shows the study of predicted interference to Station WPVI-TV. It is proposed to operate with vertical polarization only. The predicted area of interference lies entirely outside of communities of population of 50,000 or more. In this case the equivalent maximum horizontally polarized power is 0.003125 kilowatts. All of the distances to the interfering contours are less than 15 km; therefore, the F(50,50) curves were used. The Commission's curves do not contain predicted field strength values for distances less than 1.5 km. For the antenna heights involved (245 meters average) the distance dependence of field strength agrees with that of free space propagation, that is, it is of the form (20)log (distance). The field strength at 1.5 km is approximately 102.7 dBu. Thus a constant value of 106.2 at 1.0 kilometers will produce agreement with the curves. Therefore, for distances less than 1.5 kilometer field strength, in dBu/kW is given by:

$$F = 106.2 - (20)\log (\text{Distance}).$$

Table IV shows that the population within the predicted area of interference is approximately 3102 persons based upon the latest available published census data (1980). The population count was made using census tract data. A polar planimeter was used to determine the percentage of area and hence population within each pertinent tract. Because this population exceeds 3000 persons the Beacon agrees to effectively install at least 102 filters. Thus, the proposed operation complies with the rules.

Exhibit VB-1 is a sketch of the proposed antenna and supporting structure. All pertinent heights and elevation data are included. The tower will be shared with stations WFMZ-TV and WFMZ(FM).

Exhibit VB-2 is a statement which addresses any interference potential and the applicant's acceptance of the responsibility to correct such interference.

Exhibit VB-3 is a 7.5 minute topographic map quadrangle that shows the proposed transmitter location. The predicted interfering contour to WPVI-TV in the direction of Allentown and the pertinent portion of the Allentown city limits are also shown. The interfering contour does not include any part of Allentown.

Exhibit VB-4 is a 1:250,000 scale map which shows the proposed 60 dBu coverage contour, the proposed city of license and the area (494 sq. km.) and population (286,093 persons) within the proposed 60 dBu contour. The population is based on the 1990 census using computer routines although published data is not available. The contour was drawn from the distances listed in Tables II and III.

Exhibit VB-9 is a map of the predicted area of interference to the service of Station WPVI-TV from the proposed operation.

FCC Form 340, Section V-B, is submitted with this statement.

LECHMAN & JOHNSON, INC.

J. W. Stielper
Telecommunications Consultant
June 30, 1992

TABLE I

SEPARATION STUDY

BEACON BROADCASTING CORPORATION
AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT (BPED-900905ML)
NON-COMMERCIAL FM RADIO STATION
ALLENTOWN, PENNSYLVANIA

Channel 207A 0.125 W (V) 245 Meters

Designation	Channel (MHz)	Pertinent Allocation or Authorized Station	Separation Actual	(Km) Required
Co-channel	207A (89.3)	WRDV, Warminster, PA BPED-880422MA 040-12-19 / 075- 6-27 1.00 kw / 36 m bearing from proposed = 144.70 deg existing F(50,50) 60 = 10.20 km proposed F(50,10) 40 = 37.76 km existing F(50,10) 40 = 35.57 km proposed F(50,50) 60 = 11.29 km	48.94 CLEAR (0.98 km)	47.96
Co-channel	207A (89.3)	WRDV, Warminster, PA BLED-801215AB 040-12-19 / 075- 6-27 0.20 kw / 27 m bearing from proposed = 144.70 deg existing F(50,50) 60 = 6.71 km proposed F(50,10) 40 = 37.76 km existing F(50,10) 40 = 22.42 km proposed F(50,50) 60 = 18.18 km	48.94 CLEAR (4.47 km)	44.47
1st Adjacent	206B (89.1)	New York, NY WINDOW OPEN, 040-45- 0 / 073-58- 7 0.00 kw / 0 m [illegible]	126.17 CLEAR (13.17 km)	113

TABLE I
(Continued - Page Two)

SEPARATION STUDY

Designation	Channel (MHz)	Pertinent Allocation or Authorized Station	Separation Actual	(Km) Required
1st Adjacent	206A (89.1)	WYBF, Radnor Towns, PA BMPED-910710ID 040- 3-22 / 075-22-30 0.70 kw / 68 m bearing from proposed = 174.37 deg existing F(50,50) 60 = 13.73 km proposed F(50,10) 54 = 27.03 km existing F(50,10) 54 = 20.48 km proposed F(50,50) 60 = 18.18 km	56.78 CLEAR (16.03 km)	41
1st Adjacent	206A (89.1)	WXVU, Villanova, PA BPED-870402KA 040- 3-22 / 075-22-30 0.70 kw / 68 m bearing from proposed = 174.37 deg existing F(50,50) 60 = 13.73 km proposed F(50,10) 54 = 27.03 km existing F(50,10) 54 = 20.48 km proposed F(50,50) 60 = 18.18 km	56.78 CLEAR (16.03 km)	41
1st Adjacent	206A (89.1)	WYBF, Radnor Towns, PA BPED-860725MH 040- 3-22 / 075-22-30 0.70 kw / 68 m bearing from proposed = 174.37 deg	56.78 CLEAR (16.03 km)	41

TABLE I
(Continued - Page Three)

SEPARATION STUDY

Designation	Channel (MHz)	Pertinent Allocation or Authorized Station	Separation Actual	(Km) Required
		existing F(50,10) 54 = 20.48 km proposed F(50,50) 60 = 18.18 km		
2nd Adjacent	205A (88.9)	WBYO, Sellersville, PA BPED-870514MN	21.51	14.97
		040-23- 2 / 075-2[illegible]- 2 0.10 kw / 133 m bearing from proposed = 159.26 deg	CLEAR (6.54 km)	
		existing F(50,50) 60 = 11.80 km proposed F(50,10) 80 = 3.17 km existing F(50,10) 80 = 3.58 km proposed F(50,50) 60 = 11.31 km		
2nd Adjacent	209A (89.7)	WDVR, Delaware Town, NJ BPED-890531IA	41.33	20
		040-30-37 / 074-57-29 0.01 kw / 92 m bearing from proposed = 98.33 deg	CLEAR (21.58 km)	
		existing F(50,50) 60 = 4.68 km proposed F(50,10) 80 = 5.33 km existing F(50,10) 80 = 1.57 km proposed F(50,50) 60 = 18.18 km		
2nd Adjacent	209A (89.7)	WDVR, Delaware Town, NJ BPED-860418MB	43.98	21
		040-26-56 / 074-56-40 0.11 kw / 53 m bearing from proposed = 106.95 deg	CLEAR (23.32 km)	
		existing F(50,50) 60 = 7.67 km proposed F(50,10) 80 = 5.33 km existing F(50,10) 80 = 2.48 km proposed F(50,50) 60 = 18.18 km		

TABLE I
(Continued - Page Four)

SEPARATION STUDY

Designation	Channel (MHz)	Pertinent Allocation or Authorized Station	Separation Actual	(Km) Required
I.F. Beat	260B (99.9)	WODEFM, Easton, PA BLH-6145 040-42-30 / 075-13- 0 50.00 kw / 137 m bearing from proposed = 49.77 deg	24.74 CLEAR (	15 9.74 km)
I.F. Beat	260B (99.9)	Easton, PA WINDOW OPEN, 040-42-30 / 075-13- 0 0.00 kw / 0 m bearing from proposed = 49.77 deg	24.74 CLEAR (	15 9.74 km)

END OF STUDY

TABLE II

DISTANCE TO PROPOSED 60 DBU COVERAGE CONTOUR

BEACON BROADCASTING CORPORATION
AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT (BPED-900905ML)
NON-COMMERCIAL FM RADIO STATION
ALLENTOWN, PENNSYLVANIA

Channel 207A 0.125 W (V) 245 Meters

Azimuth (^{0} True)	Average Elevation 3-6 km (Meters A.M.S.L.)[1]	Effective Antenna Height Above Average Terrain (Meters)	Effective Radiated Power (dBk)	Distance to Proposed 60 dBu Contour (km)
0	127.1	269.3	-17.9	10.8
45	122.5	273.9	-9.1	18.2
90	143.2	253.2	-9.6	16.9
135	166.1	230.3	-15.4	11.5
180	199.3	197.1	-13.0	12.2
225	219.1	177.3	-14.0	11.0
270	123.4	273.0	-22.7	8.1
315	111.8	284.6	-24.0	7.6

Ground elevation at site A.M.S.L.	283.4 Meters
Average elevation of terrain (3-16 km)	151.6 Meters
Effective antenna height above average terrain	244.8 Meters[2]
Effective antenna height above ground level	113.0 Meters
Effective antenna height A.M.S.L.	396.4 Meters
Overall tower height above ground level	203.6 Meters
Overall tower height A.M.S.L.	487.0 Meters

Coordinates

North Latitude: 40^0 33' 54"
West Longitude: 75^0 26' 26"

[1] Elevation data taken from the WFMZ-TV records on file at the Commission.

[2] Rounded to 245 meters

TABLE III - Page 1

ALLOCATION STUDY

BEACON BROADCASTING CORPORATION
AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT (BPED-900905ML)
NON-COMMERCIAL FM RADIO STATION
ALLENTOWN, PENNSYLVANIA

Channel 207A 0.125 kW (Max DA) 245 Meters

Bear True	HAAT (m)	ERP (dBk)	80 dBu F(50,50) Distance (km)	60 DbU F(50,50) Distance (km)	40 dBu F(50,10) Distance (km)
000	269.300	-017.980	2.428	10.790	35.956
010	274.600	-015.980	2.907	12.177	40.644
020	282.500	-013.980	3.479	13.791	45.866
030	278.400	-011.980	4.109	15.335	50.508
040	275.500	-009.980	4.830	17.235	55.252
045	273.900	-009.070	5.180	18.150	57.419
050	269.300	-009.030	5.160	18.028	57.106
060	247.100	-009.030	4.990	17.227	55.152
070	260.800	-009.030	5.090	17.726	55.359
080	242.500	-009.030	4.960	17.057	54.742
090	253.200	-009.560	4.839	16.890	54.376
100	263.000	-010.690	4.479	16.067	52.429
110	223.800	-012.170	3.816	13.576	45.180
120	220.900	-013.500	3.430	12.541	41.831
130	228.300	-014.560	3.186	12.024	40.202
135	230.300	-015.380	2.964	11.548	38.619
140	235.900	-016.000	2.853	11.289	37.762
150	227.300	-016.000	2.936	11.380	37.042
160	216.500	-015.220	2.964	11.307	37.697
170	202.700	-014.200	3.145	11.587	38.502
180	197.100	-013.000	3.417	12.214	40.488
190	212.300	-012.270	3.717	13.164	43.723
200	210.600	-012.220	3.720	13.150	43.654
210	207.600	-012.220	3.700	13.059	43.329
220	183.500	-013.000	3.331	11.819	39.141
225	177.300	-013.980	3.072	11.014	36.560
230	192.600	-014.780	2.945	10.954	36.357
240	256.000	-016.780	2.697	11.249	37.581
250	273.800	-018.780	2.258	10.396	34.592
260	275.000	-020.780	1.844	09.254	30.717
270	273.000	-022.780	1.611	08.110	27.312
280	270.900	-023.160	1.542	07.876	25.085
290	270.500	-023.460	1.489*	07.715	26.183
300	280.300	-023.780	1.435*	07.689	26.155
310	274.300	-023.980	1.403*	07.500	25.601
315	284.600	-023.980	1.403*	07.643	26.053
320	285.500	-023.980	1.403*	07.655	26.092

TABLE III - Page 1
(continued)

Bear True	HAAT (m)	ERP (dBk)	80 dBu F(50,50) Distance (km)	60 DbU F(50,50) Distance (km)	40 dBu F(50,10) Distance (km)
330	288.400	-023.980	1.403*	07.693	26.218
340	298.900	-021.980	1.615	08.947	29.867
350	289.500	-019.980	2.008	09.966	33.134

* Less than 1.5 km - Free space propagation

TABLE III - Page 2

BEACON BROADCASTING CORPORATION
AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT (BPED-900905ML)
NON-COMMERCIAL FM RADIO STATION
ALLENTOWN, PENNSYLVANIA

Channel 207A 0.125 kW (Max DA) 245 Meters

Bear True	HAAT (m)	ERP (dBk)	70 dBu F(50,50) Distance km	54 dBu F(50,50) Distance km
000	269.300	-017.980	5.602	15.286
010	274.600	-015.980	6.541	17.856
020	282.500	-013.980	7.615	20.605
030	278.400	-011.980	8.636	23.025
040	275.500	-009.980	9.721	25.654
045	273.900	-009.070	10.225	26.915
050	269.300	-009.030	10.161	26.762
060	247.100	-009.030	9.729	25.729
070	260.800	-009.030	9.995	26.365
080	242.500	-009.030	9.639	25.516
090	253.200	-009.500	9.579	25.340
100	263.000	-010.600	9.143	24.243
110	223.800	-012.170	7.615	20.477
120	220.900	-013.500	6.952	18.695
130	228.300	-014.560	6.602	17.760
135	230.300	-015.380	6.282	16.868
140	235.900	-016.000	6.091	16.371
150	227.300	-016.000	5.987	15.998
160	216.500	-015.220	6.166	16.412
170	202.700	-014.200	6.380	16.924
180	197.100	-013.000	6.783	18.073
190	212.300	-012.270	7.361	19.777
200	210.600	-012.220	7.353	19.751
210	207.600	-012.220	7.300	19.593
220	183.500	-013.000	6.566	17.328
225	177.300	-013.980	6.098	15.800
230	192.600	-014.780	6.010	15.695
240	256.000	-016.780	5.979	16.216
250	273.800	-020.780	5.306	14.506
260	275.000	-018.780	3.513	13.012
270	273.800	-023.460	3.306	11.506
280	270.900	-022.780	3.609	11.143
290	270.500	-023.780	3.819	11.563
300	280.300	-023.980	3.534	11.136
310	274.300	-023.980	3.460	10.891
315	784.600	-023.980	3.484	11.095
320	285.500	-023.980	3.486	11.113
330	288.400	-023.980	3.493	11.169
340	298.900	-021.980	4.195	12.704
350	289.500	-019.980	4.921	13.964